

AEROSOLS MEASUREMENT AS PRODUCT OF BIOMASS BURNING ONC CRYOSPHERE IN THE CENTRAL ANDES

Tomás Rafael Bolaño-Ortiz^{a,b}, Romina María Pascual Flores^{a,b}, María Florencia Ruggerib^{b,c},
Susan Gabriela Lakkis^d, Salvador Enrique Puliafito^{a,b}

^a*Grupo de Estudios de la Atmósfera y el Ambiente, Facultad Regional Mendoza, Universidad
Tecnológica Nacional, Rodríguez 273, Mendoza-Argentina (M5502AJE)*

^b*Consejo Nacional de Investigaciones Científicas y Técnicas – CONICET*

^c*Instituto Argentino de Nivología, Glaciología y Ciencias Ambientales – IANIGLA*

^d*Facultad Regional Buenos Aires. Universidad Tecnológica Nacional*

E-mail: tomas.bolano@frm.utm.edu.ar

The cryosphere on the Central Andes between Argentina and Chile is an important water reservoir; therefore, it is important to ensure the sustainability of this resource for the ecosystem and millions of people in this region. Then, the knowledge about hydrological cycle and the different phenomena that are affecting its radiative balance caused by absorbing aerosols of solar radiation, some of these aerosols can be generated by large burning of biomass, a practice that occurs during crop changes in the austral spring in South America. For this reason, it has been analyzed in several basins uses remote knowledge data for 17 years (2000 - 2016) and the analysis of variations on snow albedo, aerosol optical depth (ODA) and land surface temperature of several water basins of that region. The partial results indicate a negative tendency in the snow albedo decrease related to the AOD variations. The next step will be collect snow samples to measure levoglucosan, mannosan and galactosan to establish if there is on snow presence of aerosol from the biomass combustion and the type of biomass source.